Biotechnical Faculty / MEDITERRANEAN FRUIT GROWING / SOIL SCIENCE

Course:	SOIL SCIENCE			
Course ID	**Course status**	**Semester**	**ECTS credits**	**Lessons** (Lessons+Exercises+Laboratory)
2856	Mandatory	1	6	3+0+2
Programs	MEDITERRANEAN FRUIT GROWING			
Prerequisites	None			
Aims	ntroduction to the creation, composition and the most important physical, chemical, biological and morphological characteristics of the soil. Damage to soil and protection measures. Soil systematics / genesis, properties, fertility and distribution /			
Learning outcomes	After passing this exam student will be able to: Analyzed soil properties (based on the causes of its origin and morphological, physical and chemical properties); Interpreters level of fertility and the productive capacity of the soil; Submit geographic distribution of soil resources based on the soil classification units; Perceive the problems of soil damage and to propose measures for the protection and mode of rational use.			
Lecturer / Teaching assistant	Doc. Mirko Knežević PhD, Miloš Šturanović MSc			
Methodology	Lectures, exercises, seminars, tests, independent work, colloquiums and final exam			
Plan and program of work				
Preparing week	Preparation and registration of the semester			
I week lectures	Assignment, importance and division of soil science. Pedogenic factors of soil.			
I week exercises	Accessories for soil field research			
II week lectures	The parent material: natural (rocks and minerals) and technogenic. Pedogenic processes.			
II week exercises	Field survey			
III week lectures	Clay minerals, Organic matter in the soil, genesis, characteristics and importance of organic matter.			
III week exercises	Opening, description and sampling in profile			
IV week lectures	Migration and accumulation of soil constituents, Mechanical composition, texture, structure, density and porosity of the soil.			
IV week exercises	Preparing the soil samples for performance analysis			
V week lectures	Physical and mechanical properties / plasticity, stickiness, swelling and contraction /. Water in the soil: forms, potential, capacities.			
V week exercises	Determination of mechanical soil composition, and Test I			
VI week lectures	Air and thermal properties of soils.			
VI week exercises	Determination of the soil aggregate			
VII week lectures	Colloquium I			
VII week exercises	Determination of soil particle density			
VIII week lectures	Soil chemistry: composition and properties of colloids, adsorptive capacity; Corrective colloquium I.			
VIII week exercises	Determination of bulk density			
IX week lectures	Soil reaction, correction reactions. The soil solution / concentration and composition /, soil buffering.			
IX week exercises	Determination of soil porosity			
X week lectures	Oxidation-reduction potential. Ecological importance of soil and soil degradation processes.			
X week exercises	Direct methods of soil moisture determination			
XI week lectures	Types of soil contamination. Measures of protection and remediation of the soil.			
XI week exercises	Indirect methods of soil moisture determination			
XII week lectures	The soil fertility. Soil classification.			
XII week exercises	Determination of water infiltration			
XIII week lectures	The most common types soil in Montenegro. Humus-accumulative and eluviation-illuvial soil.			
XIII week exercises	Determining soil permeability (filtration)			

XIV week lectures	Cambic soil. Colloquium II
XIV week exercises	Determination of physical and mechanical properties of the soil
XV week lectures	Hydrogenic and halomorphic soil. Corrective colloquium II
XV week exercises	Determination of chemical properties of soil, Test II
Student workload	

Per week	**Per semester**
6 credits x 40/30=8 hours and 0 minuts 3 sat(a) theoretical classes 2 sat(a) practical classes 0 excercises **3 hour(s) i 0 minuts** of independent work, including consultations	Classes and final exam: **8 hour(s) i 0 minuts x 16 =128 hour(s) i 0 minuts** Necessary preparation before the beginning of the semester (administration, registration, certification): **8 hour(s) i 0 minuts x 2 =16 hour(s) i 0 minuts** Total workload for the subject: **6 x 30=180 hour(s)** Additional work for exam preparation in the preparing exam period, including taking the remedial exam from 0 to 30 hours (remaining time from the first two items to the total load for the item) **36 hour(s) i 0 minuts** Workload structure: **128 hour(s) i 0 minuts (cources), 16 hour(s) i 0 minuts (preparation), 36 hour(s) i 0 minuts (additional work)**
Student obligations	Students are required to attend lectures, have completed all exercises, tests, colloquiums and final exam
Consultations	In agreement with the students
Literature	N. Tančić (1994):Pedologija (I dio), Poljoprivredni fakultet, Beograd; H.Resulović, H.Čustovi (2002): Pedologija(opći dio), Univerzitet,Sarajevo; N.Miljković(1996):Osnovi Pedologije, Univerzitet u Novom Sadu; H.Resulović, H.Čustović, I.Čengić(2008):Sistematika tla/zemljišta, Univerzitet u Sarajevu; G. Dugalić, B.Gajić(2005):Pedologija-praktikum,Čačak; G. Dugalić, B.Gajić(2012):Pedologija-udžbenik,Čačak; 7. B.Fuštić i G.Đuretić(2000): Zemljišta Crne Gore, knjiga. Podgorica
Examination methods	Homework - 10 points (10x1 points), I and II colloquium - 10 points (2 x 5 points), Activity in class lectures -20 points, Activity in class exercises -10 points Final exam - 40 points. Passing grade is obtained when student achieved at least 50 points.
Special remarks	
Comment	

Grade:	F	E	D	C	B	A
Number of points	less than 50 points	greater than or equal to 50 points and less than 60 points	greater than or equal to 60 points and less than 70 points	greater than or equal to 70 points and less than 80 points	greater than or equal to 80 points and less than 90 points	greater than or equal to 90 points